

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 05 DEC 2005

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Applicant's or agent's file reference 429388003WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US05/03889	International filing date (day/month/year) 07 February 2005 (07.02.2005)	Priority date (day/month/year) 07 February 2004 (07.02.2004)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04J 1/16, 3/14 and US Cl.: 370/235, 237		
Applicant WALTICAL SOLUTIONS, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 08 August 2005 (08.08.2005)	Date of completion of this report 09 November 2005 (09.11.2005)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/ US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Min Jung Telephone No. 703-305-4750

Form PCT/IPEA/409 (cover sheet)(July 1998)

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed.
- ☒ the description:
pages 1-10 as originally filed
pages none, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the claims:
pages 11-17, as originally filed
pages none, as amended (together with any statement) under Article 19
pages none, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the drawings:
pages 1-6, as originally filed
pages none, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages none
- ☒ the claims, Nos. none
- ☒ the drawings, sheets/~~fig~~ none

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US05/03889

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>1-7</u>	YES
	Claims <u>8-24</u>	NO
Inventive Step (IS)	Claims <u>none</u>	YES
	Claims <u>1-24</u>	NO
Industrial Applicability (IA)	Claims <u>1-24</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 8-24 lack novelty under PCT Article 33(2) as being anticipated by Khan.

Regarding claim 8, Khan teaches a hybrid ARQ system that operates by retransmitting data packets. The system of Khan includes ACK/NACK messages [0016] and FEC [0045].

Regarding claim 9, Khan teaches modulation schemes [0028].

Regarding claims 10-14, Khan teaches selecting one of a number of channels for retransmission of failed packets [0032].

Regarding claims 14-22, Khan teaches channels selected for retransmission including NACK signals [0038], multiple ARQ schemes or processes [0016], header and FEC information used with the ARQ process [0045] (see figure 1).

Regarding claim 23, Khan teaches a hybrid ARQ system that operates by retransmitting data packets.

Regarding claim 24, Khan teaches a hybrid ARQ system that operates by retransmitting data packets. The system of Khan includes FEC [0045].

Claims 1-7 lack an inventive step under PCT Article 33(3) as being obvious over Khan in view of Lee.

Regarding claim 1, Khan teaches a hybrid ARQ system that operates by retransmitting data packets. The system of Khan includes ACK/NACK messages [0016], FEC [0045], and BER and C/I measurements used to estimate the quality levels. Khan does not, however, disclose using a CQI indicator, specifically, to address the quality factors. Lee teaches a hybrid ARQ communication system that discloses a CQI indicator (see figure 6). Both of these two references disclose methods of improved efficiency in data communications systems. Therefore, combining these two references to achieve the claimed features of claim 1 would have been obvious for one of ordinary skill in the art at the time of the invention to specifically provide an indicator for addressing the quality factors when implementing the system of Khan.

Regarding claims 2-7, Khan teaches delay sensitive ARQ processing [0016], retransmission of failed packets [0036], receiving a NACK message indicating the packet needed for retransmission [0038], TDM (see figure 7(b)).

----- NEW CITATIONS -----